

# CURRICULUM VITÆ<sup>1</sup>

Matthieu LATAPY

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## General information

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## Current positions

- CNRS Senior researcher (Directeur de Recherche – DR) at LIP6. Since 2009.
- Head of the Bleckwen–SU joint lab *FiT*, funded by ANR. Since 2019.
- Advisory Committee member of the *Free Journal Network*, since 2020. Promoter of the *No free view? No review!* call, since 2020.
- Managing Board member of the *Peer Community in Network Science*, since 2020, and editorial board member of the *Peer Community Journal*, since 2021.
- Member of the Sorbonne University Council for Ethical Research (CER) and of the LIP6 laboratory board (conseil de laboratoire), since 2022.
- Member of the Paris-region working group on ecology policy *Ecopolien*, since 2021. Member of the *Sciences Citoyennes* group, since 2022.
- Editorial board member of *Complex Systems*, since 2017.
- Consulting for various companies and international public bodies.

## Career

- October 2018: promotion to 1-st class CNRS senior researcher (DR1).
- October 2009: promotion to 2-nd class CNRS senior researcher (DR2).
- January 2007: moved from LIAFA to LIP6.
- October 2006: promotion to 1-st class CNRS researcher (CR1).
- October 2002 to January 2007: 2-nd class CNRS researcher (CR2) at LIAFA.
- September 2001 to October 2002: INRIA postdoc fellow, Hipercom project.
- October 1999 to September 2001: PhD and teaching fellow at University Paris Diderot – Paris 7.
- October 1997 to October 1999: ENS Cachan student, computer science.

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<sup>1</sup>Acronyms are defined in the last page.

## Diplomas and awards

- 2021–2024: CNRS award for distinguished research activity.
- 2019: Bell Labs Prize finalist (with 9 other finalists worldwide).
- 2018: ERC proposal on *Link Streams* selected for 2nd round.
- 2010–2017: CNRS award for distinguished research activity.
- November 2007: Habilitation thesis (HDR) in Computer Science, UPMC (Sorbonne University). Title: *Complex networks – measurement and metrology, analysis, modeling, algorithmics*. Committee: Patrice Abry (referee), Giorgio Ausiello, François Baccelli, Vincent Blondel (referee), Olivier Festor, Éric Fleury (referee), Patrick Gallinari, and Michel Habib.
- May 2001: PhD in Algorithmics, University Paris Diderot – Paris 7. With honors. Advisor: Michel Morvan.
- 1993–1998: Bachelor in Computer Science (University Paris Diderot – Paris 7) and Master in Algorithmics (ENS de Cachan), with honors.

## Publications

### International referred journals:

- [1] *A local updating algorithm for personalized PageRank via Chebyshev polynomials*. Esteban Bautista, Matthieu Latapy. *Social Network Analysis and Mining (SNAM)* 12:31, 2022.
- [2] *Do you trade with your friends or become friends with your trading partners? A case study in the G1 cryptocurrency*. Nicolas Gensollen, Matthieu Latapy. *Applied Network Science* 5(1):25, 2020.
- [3] *Outlier detection in IP traffic modelled as a link stream using the stability of degree distributions over time*. Audrey Wilmet, Tiphaine Viard, Matthieu Latapy, Robin Lamarche-Perrin. *Computer Networks* 161, 2019.
- [4] *Spreading dynamics in a cattle trade network: Size, speed, typical profile and consequences on epidemic control strategies*. Aurore Payen, Lionel Tabourier, Matthieu Latapy. *PLoS ONE* 14(6), 2019.
- [5] *Predicting interactions between individuals with structural and dynamical information*. Thibaud Arnoux, Lionel Tabourier, Matthieu Latapy. *Journal of Interdisciplinary Methodologies and Issues in Sciences*, 2019.
- [6] *A general graph-based framework for top-N recommendation using content, temporal and trust information*. Armel Jacques Nzekon Nzeko’O, Maurice Tchuenté, Matthieu Latapy. *Journal of Interdisciplinary Methodologies and Issues in Sciences*, 2019.
- [7] *Pattern matching in link streams: timed-automata with finite memory*. Clément Bertrand, Frédéric Peschanski, Hanna Klaudel, Matthieu Latapy. *Scientific Annals of Computer Science* 28(2):161-198, 2018.
- [8] *Stream graphs and link streams for the modeling of interactions over time*. Matthieu Latapy, Tiphaine Viard, Clémence Magnien. *Social Network Analysis and Mining (SNAM)* 8(1): 61:1-61:29, 2018.
- [9] *Enumerating maximal cliques in link streams with durations*. Tiphaine Viard, Clémence Magnien, Matthieu Latapy. *Information Processing Letters (IPL)* 133 (44-48), 2018.
- [10] *Rigorous measurement of the internet degree distribution*. Matthieu Latapy, Elie Rotenberg, Christophe Crespelle, Fabien Tarissan. *Complex Systems*, 26(1), 2017.
- [11] *Finding remarkably dense sequences of contacts in link streams*. Noé Gaumont, Clémence Magnien, Matthieu Latapy. *Social Network Analysis and Mining (SNAM)* 6(1): 87:1-87:14, 2016.

- [12] *Computing maximal cliques in link streams.* Tiphaine Viard, Matthieu Latapy, Clémence Magnien. *Theoretical Computer Science (TCS)* 609 (245-252), 2016.
- [13] *Temporal Patterns of Pedophile Activity in a P2P Network: First Insights about User Profiles from Big Data.* Raphaël Fournier-S'niehotta, Matthieu Latapy. *International Journal of Internet Science (IJIS)* 10 (1), 2015.
- [14] *On the Termination of Some Biclique Operators on Multipartite Graphs.* Christophe Crespelle, Matthieu Latapy, Ha Duong Phan. *Discrete Applied Mathematics* 195 (59-73), 2015.
- [15] *Efficient and simple generation of random simple connected graphs with prescribed degree sequence.* Fabien Viger, Matthieu Latapy. *Journal of Complex Networks* 4(1) (15-37), 2015.
- [16] *Comparing Pedophile Activity in Different P2P Systems.* Raphaël Fournier, Thibault Cholez, Matthieu Latapy, Isabelle Chrisment, Clémence Magnien, Olivier Festor, Ivan Daniloff. *Social Sciences*, volume 3, issue 3, 2014.
- [17] *Detecting events in the dynamics of ego-centered measurements of the internet topology.* Matthieu Latapy, Assia Hamzaoui, Clémence Magnien. *Journal of Complex Networks*, volume 2, issue 1, 2014.
- [18] *Inadequacy of SIR Model to Reproduce Key Properties of Real-world Spreading Cascades: Experiments on a Large-scale P2P System.* Daniel F. Bernardes, Matthieu Latapy, Fabien Tarissan. *Social Network Analysis and Mining (SNAM)*, volume 3, issue 4, 2013.
- [19] *Towards a bipartite graph modeling of the internet topology.* Fabien Tarissan, Bruno Quoitin, Pascal Mérindol, Benoit Donnet, Jean-Jacques Pansiot, Matthieu Latapy. *Computer Networks*, Volume 57, Issue 11, pages 2331-2347, 2013.
- [20] *Quantifying Paedophile Activity in a Large P2P System.* Matthieu Latapy, Clémence Magnien, Raphaël Fournier. *Information Processing and Management (IPM)*, Volume 49, Issue 1, January 2013.
- [21] *Internal links prediction: a new approach for predicting links in bipartite graphs.* Oussama Allali, Clémence Magnien, Matthieu Latapy. *Intelligent Data Analysis*, Volume 17, Issue 1, 2013.
- [22] *Internal links and pairs as a new tool for the analysis of bipartite complex networks.* Oussama Allali, Lionel Tabourier, Clémence Magnien, Matthieu Latapy. *Social Network Analysis and Mining (SNAM)*, volume 3, issue 1, 2013.
- [23] *Diffusion Cascades: Spreading Phenomena in Blog Network Communities.* Abdelhamid Salah Brahim, Bénédicte Le Grand, Matthieu Latapy. *Parallel Processing Letters* 22(1), March 2012.
- [24] *Deciding on the type of the degree distribution of a graph from traceroute-like measurements.* Xiaomin Wang, Matthieu Latapy, Michèle Soria. *International Journal of Computer Networks & Communications (IJCNC)*, Volume 4, Number 3, May 2012.
- [25] *A radar for the internet.* Matthieu Latapy, Clémence Magnien, Frédéric Ouédraogo. *Complex Systems*, 20(1), 23-30, 2011.
- [26] *Citations among blogs in a hierarchy of communities: method and case study.* Abdelhamid Salah brahim, Bénédicte Le Grand, Lionel Tabourier, Matthieu Latapy. *Journal of Computational Science*, Vol 2(3), 2011.
- [27] *Post-processing hierarchical community structures: quality improvements and multi-scale view.* Pascal Pons, Matthieu Latapy. *Theoretical Computer Science (TCS)* 412 (8-10), pages 892-900, 2011.
- [28] *A real-world spreading experiment in the blogosphere.* Adrien Friggeri, Jean-Philippe Cointet, Matthieu Latapy. *Complex Systems* 19 (3), pages 235-242, 2011.

- [29] *Impact of random failures and attacks on poisson and power-law random networks.* Clémence Magnien, Matthieu Latapy, Jean-Loup Guillaume. *ACM Computing Surveys* 43 (3), pages 13-44, 2011.
- [30] *The lattice of integer partitions and its infinite extension.* Matthieu Latapy, Ha Duong Phan. *Discrete Mathematics* 309 (6), pages 1357-1367, 2009.
- [31] *Fast computation of empirically tight bounds for the diameter of massive graphs.* Clémence Magnien, Matthieu Latapy, Michel Habib. *ACM Journal of Experimental Algorithmics (JEA)* 13, pages 1.10-1.9, 2009.
- [32] *Les usages épistémiques des TIC : le cas de l'open source.* Bernard Conein, Matthieu Latapy. *Sociologie du Travail* 50 (3), pages 331-352, 2008.
- [33] *Main-memory triangle computations for very large (sparse (power-law)) graphs.* Matthieu Latapy. *Theoretical Computer Science (TCS)* 407 (1-3), pages 458-473, 2008.
- [34] *Detection, understanding, and prevention of traceroute measurement artifacts.* Fabien Viger, Brice Augustin, Xavier Cuvellier, Clémence Magnien, Matthieu Latapy, Timur Friedman, Renata Teixeira. *Computer Networks* 52, pages 998-1018, 2008.
- [35] *Basic notions for the analysis of large two-mode networks.* Matthieu Latapy, Clémence Magnien, Nathalie Del Vecchio. *Social Networks* 30 (1), pages 31-48, 2008.
- [36] *Describing and simulating routes on the internet.* Jérémie Leguay, Matthieu Latapy, Timur Friedman, Kavé Salamatian. *Computer Networks* 51, pages 2067-2087, 2007.
- [37] *Computing communities in large networks using random walks.* Pascal Pons, Matthieu Latapy. *Journal of Graph Algorithms and Applications (JGAA)* vol. 10 (2), pages 191-218, 2006.
- [38] *Relevance of massively distributed explorations of the internet topology: qualitative results.* Jean-Loup Guillaume, Matthieu Latapy, Damien Magoni. *Computer Networks* 50, pages 3197-3224, 2006.
- [39] *Bipartite graphs as models of complex networks.* Jean-Loup Guillaume, Matthieu Latapy. *Physica A* 371, pages 795-813, 2006.
- [40] *Multi-level analysis of an interaction network between individuals in a mailing-list.* Rémi Dorat, Matthieu Latapy, Bernard Conein, Nicolas Auray. *Annals of Telecommunications* 62 (3-4), 2007.
- [41] *Dynamics of three-state excitable units on Poisson vs power-law random networks.* Anne-Ruxandra Carvunis, Matthieu Latapy, Annick Lesne, Clémence Magnien, Laurent Pezard. *Physica A* 367, pages 585-612, 2006.
- [42] *Complex network metrology.* Jean-Loup Guillaume, Matthieu Latapy. *Complex Systems* 16, pages 83-94, 2005.
- [43] *Bipartite structure of all complex networks.* Jean-Loup Guillaume, Matthieu Latapy. *Information Processing Letters (IPL)* 90 (5), pages 215-221, 2004.
- [44] *Sandpile models and lattices: a comprehensive survey.* Eric Goles, Matthieu Latapy, Clémence Magnien, Michel Morvan, Ha Duong Phan. *Theoretical Computer Science (TCS)* 322, pages 383-407, 2004.
- [45] *Graph encoding of 2D-gon tilings.* Frédéric Chavanon, Matthieu Latapy, Michel Morvan, Eric Rémila, Laurent Vuillon. *Theoretical Computer Science (TCS)* 346, pages 226-253, 2005.
- [46] *Generalized tilings with height functions.* Olivier Bodini, Matthieu Latapy. *Morfismos* 7 (1), pages 47-68, 2003.
- [47] *Le treillis des chemins de Delannoy.* Jean-Michel Autebert, Matthieu Latapy, Sylviane Schwer. *Discrete Mathematics* 258 (1-3), pages 225-234, 2002.

- [48] *Coding distributive lattices with edge firing games*. Matthieu Latapy, Clémence Magnien. *Information Processing Letters (IPL)* 83, pages 125-128, 2002.
- [49] *Integer partitions, tilings of 2D-gons and lattices*. Matthieu Latapy. *RAIRO Theoretical Informatics and Applications* 36:4, pages 389-399, 2002.
- [50] *The lattice structure of chip firing games and related models*. Matthieu Latapy, Ha Duong Phan. *Physica D* 155, pages 69-82, 2001.
- [51] *Structure of some sand pile model*. Matthieu Latapy, Roberto Mantaci, Michel Morvan, Ha Duong Phan. *Theoretical Computer Science (TCS)* 262, pages 525-556, 2001.

### **Book chapters and forewords:**

- [52] *Weighted, Bipartite, or Directed Stream Graphs for the Modeling of Temporal Networks*. Matthieu Latapy, Clémence Magnien, Tiphaine Viard. Invited chapter in *Temporal Network Theory*, Springer, edited by Petter Holme and Jari Saramäki, 2019.
- [53] *Interaction Prediction Problems in Link Streams*. Thibaud Arnoux, Lionel Tabourier, Matthieu Latapy. Invited chapter in *Dynamics on and of Complex Networks (DooCN)*, Springer, edited by Fakhteh Ghanbarnejad, Rishiraj Saha Roy, Fariba Karimi, Jean-Charles Delvenne, and Bivas Mitra. 2019.
- [54] *Link streams: Methods and applications*. Matthieu Latapy, Marco Fiore, Artur Ziviani. Foreword, special issue of *Computer Networks*. 2019.
- [55] *Complex Networks and Link Streams for the Empirical Analysis of Large Software*. Matthieu Latapy, Tiphaine Viard. Invited contribution to *Petri Nets* 2014.
- [56] *Complex networks*. Matthieu Latapy. Foreword, special issue of *Computer Communications*. 2010.
- [57] *Complex computer and communication networks*. Matthieu Latapy, Walter Willinger. Foreword, special issue of *Computer Networks*. 2008.
- [58] *Complex networks*. Ravi Kumar, Matthieu Latapy. Foreword, special issue of *Theoretical Computer Science (TCS)*. 2006.
- [59] *Topologies d'internet et du web : mesure et modélisation*. Jean-Loup Guillaume, Matthieu Latapy. Dans le livre *Mesures de l'internet*, édité par *Les Canadiens en Europe*, sous la direction d'Eric Guichard. ISBN 2-9516231-5-1. 2004.

### **International referred conference and workshop proceedings:**

- [60] *Full Bitcoin blockchain data made easy*. Jules Azad Emery, Matthieu Latapy. *ASONAM (IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining)*. 2021, Online.
- [61] *A logical approach for temporal and multiplex networks analysis*. Esteban Bautista, Matthieu Latapy. *CNA (10-th International Conference on Complex Networks and their Applications)*. 2021, Madrid, Spain. Poster.
- [62] *Strongly Connected Components in Stream Graphs: Computation and Experimentations*. Léo Rannou, Clémence Magnien, Matthieu Latapy. *CNA (9-th International Conference on Complex Networks and their Applications)*. 2020, Online.
- [63] *Degree-based Outliers Detection within IP Traffic Modelled as a Link Stream*. Audrey Wilmet, Tiphaine Viard, Matthieu Latapy, Robin Lamarche-Perrin. *TMA (2-nd IFIP Network Traffic Measurement and Analysis Conference)*. 2018, Vienna, Austria.
- [64] *Pattern Matching in Link Streams: a Token-based Approach*. Clément Bertrand, Hanna Kludel, Frédéric Peschanski, Matthieu Latapy. *PetriNets (39-th International Conference on Applications and Theory of Petri Nets and Concurrency)*. 2018, Bratislava, Slovakia.

- [65] *Discovering Patterns of Interest in IP Traffic Using Cliques in Bipartite Link Streams.* Tiphaine Viard, Raphaël Fournier-S'niehotta, Clémence Magnien, Matthieu Latapy. *CompleNet* (9-th international conference on Complex Networks). 2018, Boston, USA.
- [66] *Tracking bitcoin users activity using community detection on a network of weak signals.* Rémy Cazabet, Rym Baccour, Matthieu Latapy. 6th International Conference on Complex Networks and Their Applications. 2017, Lyon, France.
- [67] *Combining structural and dynamic information to predict activity in link streams.* Thibaud Arnoux, Lionel Tabourier, Matthieu Latapy. *FAB* (3-rd international symposium on Foundations and Applications of Big data analytics), ASONAM workshop. 2017, Sydney, Australia.
- [68] *Impact of Temporal Features of Cattle Exchanges on the Size and Speed of Epidemic Outbreaks.* Aurore Payen, Lionel Tabourier, Matthieu Latapy. LNCS, ICCSA (17-th International Conference on Computational Science and its Applications). 2017, Trieste, Italy.
- [69] *Time Weight Content-Based Extensions of Temporal Graphs for Personalized Recommendation.* Armel Jacques Nzekon Nzeko'o, Maurice Tchunte, Matthieu Latapy. WEBIST (13-th international conference on Web Information Systems and Technologies). 2017, Porto, Portugal.
- [70] *Analysis of the temporal and structural features of threads in a mailing-list.* Noé Gaumont, Tiphaine Viard, Raphaël Fournier-S'niehotta, Qinna Wang, Matthieu Latapy. *CompleNet* (7-th international workshop on Complex Networks). 2016, Dijon, France.
- [71] *Revealing contact patterns among high-school students using maximal cliques in link streams.* Tiphaine Viard, Matthieu Latapy, Clémence Magnien. *DyNo* (1-st international workshop on Dynamics in Networks), ASONAM workshop. 2015, Paris, France.
- [72] *Social Network Analysis of Developers and Users Mailing Lists of Some Free Open Source Software.* Armel Jacques Nzekon Nzeko'o, Matthieu Latapy, Maurice Tchunte. *BigData* (4-th International Congress on Big Data). 2015, New York City, USA.
- [73] *Expected Nodes: a quality function for the detection of link communities.* Noé Gaumont, François Queyroi, Clémence Magnien, Matthieu Latapy. *CompleNet* (6-th international workshop on Complex Networks). 2015, New York City, USA.
- [74] *UDP Ping: a dedicated tool for improving measurements of the Internet topology.* Matthieu Latapy, Elie Rotenberg, Christophe Crespelle, Fabien Tarissan. IEEE MASCOTS (22-nd International Symposium on Modeling Analysis and Simulation of Computer and Telecommunication Systems). 2014, Paris, France.
- [75] *Measuring the Degree Distribution of Routers in the Core Internet.* Matthieu Latapy, Elie Rotenberg, Christophe Crespelle, Fabien Tarissan. IFIP Networking (13-th IFIP international conference on Networking). 2014, Trondheim, Norway.
- [76] *Identifying Roles in an IP Network with Temporal and Structural Density.* Tiphaine Viard, Matthieu Latapy. IEEE NetSciCom (6-th international workshop on Network Science for Communication networks). 2014.
- [77] *Measuring Routing Tables in the Internet.* Elie Rotenberg, Christophe Crespelle, Matthieu Latapy. IEEE NetSciCom (6-th international workshop on Network Science for Communication networks). 2014.
- [78] *Relevance of SIR Model for Real-world Spreading Phenomena: Experiments on a Large-scale P2P System.* Daniel F. Bernardes, Matthieu Latapy, Fabien Tarissan ASONAM (IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining), 2012, Istanbul, Turkey.
- [79] *Outskewer: Using Skewness to Spot Outliers in Samples and Time Series.* Sébastien Heymann Matthieu Latapy, Clémence Magnien ASONAM (IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining), 2012, Istanbul, Turkey.

- [80] *Link prediction in bipartite graphs using internal links and weighted projection*. Oussama Allali, Clémence Magnien, Matthieu Latapy. IEEE *NetSciCom* (3-nd international workshop on Network Science for Communication networks). 2011.
- [81] *Quantifying paedophile queries in a large P2P system*. Matthieu Latapy, Clémence Magnien, Raphaël Fournier. IEEE Infocom Mini-Conference. April 10, 2011, Shanghai, China.
- [82] *Termination of multipartite graph series arising from complex network modelling*. Matthieu Latapy, Thi Ha Duong Phan, Christophe Crespelle, Thanh Qui Nguyen. COCOA (4-th international Conference on Combinatorial Optimization and Applications). December 18-20, 2010, Hawaii, USA.
- [83] *Deciding on the type of a graph from a BFS*. Xiaomin Wang, Matthieu Latapy, Michèle Soria. *CompleNet* (2-nd international workshop on Complex Networks). October 13-15, 2010, Rio de Janeiro, Brazil.
- [84] *Detecting events in the dynamics of ego-centered measurements of the internet topology*. Assia Hamzaoui, Matthieu Latapy, Clémence Magnien. WDN/WiOpt (1-st international Workshop on Dynamic Networks). May 31 - June 4, 2010, Avignon, France.
- [85] *Some insight on dynamics of posts and citations in different blog communities*. Abdelhamid Salah Brahim, Bénédicte Le Grand, Matthieu Latapy. IEEE ICC (International Conference on Communications, social network workshop). May 23-27, 2010, Cape Town, South Africa.
- [86] *Rigorous measurement of IP-level neighborhood of internet core routers*. Christophe Crespelle, Matthieu Latapy, Elie Rotenberg. IEEE *NetSciCom* (2-nd international workshop on Network Science for Communication networks). March 19, 2010, San Diego, CA, USA.
- [87] *Measurement of eDonkey activity with distributed honeypots*. Oussama Allali, Matthieu Latapy, Clémence Magnien. *HotP2P* (6-th international workshop on Hot topics in Peer-to-Peer systems). May 29, 2009, Rome, Italy.
- [88] *Ten weeks in the life of an eDonkey server*. Frédéric Aidouni, Matthieu Latapy, Clémence Magnien. *HotP2P* (6-th international workshop on Hot topics in Peer-to-Peer systems). May 29, 2009, Rome, Italy.
- [89] *Fast dynamics in internet topology: preliminary observations and explanations*. Clémence Magnien, Frédéric Ouedraogo, Guillaume Valadon, Matthieu Latapy. ICIMP (4-th International Conference on Internet Monitoring and Protection). May 24-28, 2009, Venice, Italy.
- [90] *Efficient measurement of complex networks using link queries*. Fabien Tarissan, Matthieu Latapy, Christophe Prieur. IEEE *NetSciCom* (1-st international workshop on Network Science for Communication networks). April 24, 2009, Rio de Janeiro, Brazil.
- [91] *A radar for the internet*. Matthieu Latapy, Clémence Magnien, Frédéric Ouedraogo. ADN (1-st international workshop on Analysis of Dynamic Networks). 2008, Pisa, Italy.
- [92] *Complex network measurements: estimating the relevance of observed properties*. Matthieu Latapy, Clémence Magnien. IEEE 27-th international conference *Infocom*. 2008, Phoenix, USA.
- [93] *Avoiding traceroute anomalies with Paris traceroute*. Brice Augustin, Xavier Cuvellier, Benjamin Orgogozo, Fabien Viger, Timur Friedman, Matthieu Latapy, Clémence Magnien, Renata Teixeira. IMC (6-th Internet Measurement Conference). 2006, Rio de Janeiro, Brazil. **2022 Test of Time Award for ACM Internet Measurement Conference.**
- [94] *Computing communities in large networks using random walks*. Pascal Pons, Matthieu Latapy. LNCS, ISCIS (20-th International Symposium on Computer and Information Sciences). 2005, Istanbul, Turkey.

- [95] *Combining the use of clustering and scale-free nature of user exchanges into a simple and efficient P2P system.* Philippe Gauron, Pierre Fraigniaud, Matthieu Latapy. LNCS, 11-th international conference *Euro-Par*. 2005, Lisbon, Portugal.
- [96] *Efficient and simple generation of random simple connected graphs with prescribed degree sequence.* Fabien Viger, Matthieu Latapy. LNCS, COCOON (11-th international conference Computing and Combinatorics). 2005, Kunming, Yunnan, China.
- [97] *Relevance of massively distributed explorations of the internet topology: simulation results.* Jean-Loup Guillaume, Matthieu Latapy. IEEE 24-th international conference *Infocom*. 2005, Miami, USA.
- [98] *Describing and simulating routes on the internet.* Jérémie Leguay, Matthieu Latapy, Timur Friedman, Kavé Salamatian. LNCS, IFIP *Networking* (4-th IFIP international conference on Networking). 2005, Waterloo, Canada.
- [99] *Clustering in P2P exchanges and consequences on performances.* Stevens Le-Blond, Jean-Loup Guillaume, Matthieu Latapy. LNCS, IPTPS (4-th International workshop on Peer-to-Peer Systems). 2005, Ithaca, New York, USA.
- [100] *Comparison of failures and attacks on random and scale-free networks.* Jean-Loup Guillaume, Matthieu Latapy, Clémence Magnien. LNCS, OPODIS (8-th international conference On Principles Of Distributed Systems). 2004, Grenoble, France.
- [101] *Statistical analysis of a P2P query graph based on degrees and their time-evolution.* Jean-Loup Guillaume, Matthieu Latapy, Stevens Le-Blond. LNCS, IWDC (6-th International Workshop on Distributed Computing). 2004, Kolkata, India.
- [102] *Bipartite graphs as models of complex networks.* Jean-Loup Guillaume, Matthieu Latapy. LNCS, CAAN (1-st international workshop on Combinatorial and Algorithmic Aspects of Networking). 2004, Banff, Canada.
- [103] *Efficient and simple encodings for the web graph.* Jean-Loup Guillaume, Matthieu Latapy, Laurent Viennot. LNCS, WAIM (3-rd international conference Web-Age Information Management). 2002, Beijing, China.
- [104] *Partitions of an integer into powers.* Matthieu Latapy. DMTCS, DM-CCG (1-st international conference Discrete Models - Computation, Combinatorics and Geometry). 2001, Paris, France.
- [105] *Pseudo-permutations I: first combinatorial and lattice properties.* Daniel Krob, Matthieu Latapy, Jean-Christophe Novelli, Ha Duong Phan, Sylviane Schwer. FPSAC (13-th international conference Formal Power Series and Algebraic Combinatorics). 2001, Arizona, USA.
- [106] *Generalized integer partitions, tilings of zonotopes and lattices.* Matthieu Latapy. FPSAC (12-th international conference Formal Power Series and Algebraic Combinatorics). 2000, Moscow, Russia.

## Funded projects

- DGA-funded PhD support for Bastien Legay, 2022-25.
- Co-head of the *Analysis of new protest forms*, LIP6 project, 2022.
- Head of the *Analysis of Financial Transactions for Security (FiT)* SU–Bleckwen joint lab, funded by ANR, 2019–2024. <http://fit.complexnetworks.fr>
- Head of one of the two teams composing the SU–Thales joint laboratory *Centre for Learning and Retrieval (CLEAR)*. 2011–2019.
- Member of the *Opinion Dynamics and Cultural Conflict in European Spaces (ODYC-CEUS)* project, funded by the European Community *H2020* programme and led by Eckehard Olbrich (Max Planck Institute, Germany), 2017–2021.



- LIP6 head of *Investigation par Traitement et Analyse des crypto-monnaies* (iTRAC) project, funded by FUI 21 and led by Grégoire Biette (Thales), 2016–2018.
- LIP6 head of the *REcursive QUery and Scalable Technologies* (REQUEST) project, funded by the 3rd call FSN *Informatique en nuage – Cloud computing*, led by Catherine Gouttas (Thales), 2014–2017.
- Head of a PEPS HuMaIn (Humanités–Mathématiques–sciences de l’Information) project, with sociologists, 2014, renewed in 2015.
- Head of a RNSC network gathering 4 french partners, 2013-2014, renewed in 2015.
- Head of a LIP6 project gathering 3 LIP6 teams, 2013-2014.
- LIP6 co-head of the *Experimental UpdateLess Evolutive Routing* (EULER) project, funded by the European Community *Future Internet Research and Experimentation* (FIRE/STREP) programme and led by Dimitri Papadimitriou, 2010–2014.
- Member of the *Dynamics of Graph Topologies* (DynGraph) project, funded by ANR *Jeunes Chercheuses et Jeunes Chercheurs* programme, and led by Clémence Magnien, 2010–2013.
- Head of the *Diffusion dans les réseaux : mesure et analyse pour la modélisation* (DiRe) project, funded by the city of Paris, *Émergence(s)* programme, 2009–2012.
- Head of the *Measurement and Analysis of P2P Activity Against Paedophile Content* (MAPAP/MAPE) project, funded by the European Community *Safer Internet Plus* programme and the ANR *TLCOM* programme, 2007–2011.
- Member of the *opinion dynamics in virtual arenas: topology, morphogenesis and diffusion* (WebFluence) project, funded by ANR and led by Camille Roth, 2008–2010.
- Co-head of the *Approches Formelles pour la Métrologie de l’Internet* (AFMI) project, funded by LIP6, 2008–2010.
- Head of the *Analyse des Grands Réseaux d’Interactions* (AGRI) project, funded by ANR *Jeunes Chercheuses et Jeunes Chercheurs* programme, 2005–2008.
- *Management Committee* member of the DYNAMO european project, COST Action 295, 2005–2006.
- Member of the FRAGILE project, funded by *Sécurité & Informatique* ACI, 2004–2007.
- LIAFA head of the *Métrologie de l’internet pour la Sécurité* (MetroSec) project, funded by *Sécurité & Informatique* ACI, 2004–2007.
- Head of the *Programme d’Etudes des Réseaux Sociaux de l’Internet* (PERSI) project, funded by *Systèmes Complexes en SHS* ACI and *Usages de l’Internet* action, 2004–2007.
- LIAFA head of the *Graphes, Algorithmes et Probabilités* (GAP) project, funded by *Nouvelles Interfaces des Mathématiques* ACI, 2003–2006.
- Workpackage head for the *Dynamo* CNRS action, led by Pierre Fraigniaud, 2002–2003.

## Institutional responsibilities

### Management and animation of research:

- 2022–: Member of the Sorbonne University Council for Ethical Research (CER).
- 2019–2020: co-head of the LIP6 transversal axis *Safety, Security, Reliability*, involving 14 LIP6 teams.
- 2014–2021: steering committee of the Paris region Institute for Complex Systems (ISC-PIF).
- 2010–2020: steering committee of LIP6.
- 2019–2020: co-chair of ASONAM 2020 Tutorials.

- 2013–2019: founder and head of the LIP6 *Complex Systems* department.
- 2014–2017: advisory board member of the CNRS Institute of Communication Sciences (ISCC).
- 2015–2017: founder and head of the ISCC *Modeling of Interactions over Time* (MIT) group.
- 2013–2017: member of the CoNRS interdisciplinary committee 53 (CID 53), that manages in particular the recruitment and careers of CNRS researchers on *Methods, practice and communication of sciences and technologies*.
- 2012–2016: member of the CoNRS computer science committee (Section 6), that manages in particular recruitment and careers of CNRS researchers in computer science.
- 2011–2015: member of the UPMC computer science committee (Section 27), that manages in particular recruitment and careers of UPMC teaching and research staff. Committee president until august 2013.
- 2010–2013: co-head with Bertil Folliot then Franck Petit of the LIP6 *Networks and Distributed Systems* department.
- 2009–2013: elected delegate of senior researchers at IFD.
- 2007–2010: steering committee member of *Paris-Networking*.
- 2007–2012: steering committee member ASR GDR axis *RésCom*.
- 2011–2012: member of the LIP6 committee for non-publishing fellows.
- 2008–2011: founder and head of the LIP6 *Complex Networks* team (5 permanent researchers and a dozen PhD and postdoc fellows).
- 2010–2011: advisory board member of ISCC and in charge of its relations with LIP6.
- Laboratory councils: LIAFA 2003–2007; LIP6 2007–2010; LIP6 2022–.
- Member of ISC-PIF, IXXI, RNSC and CSS.

**Recruitment committees** for Professors and Assistant Professors (Section 27 – Computer Science): Sorbonne University assistant professor, 2021; Telecom ParisTech professor, 2019; University Paris Diderot professor, 2018; University Pierre et Marie Curie assistant professor, 2013, chairman; University Lyon 1 assistant professor, 2010; University Bordeaux 1 – Chaire CNRS, 2009; University Versailles-Saint-Quentin-en-Yvelines assistant professor, 2009; University d’Evry Val d’Essonne assistant professors, 2007–2009; University des Sciences et Techniques de Lille (USTL) assistant professors, 2007–2009; University Paris Diderot – Paris 7 assistant professors, 2004–2007; University Pierre et Marie Curie (UPMC – Paris 6) assistant professors, 2004–2007.

**Advisory Committee member** of the *Free Journal Network*, since 2020. Promoter of the *No free view? No review!* call, since 2020.

**Managing Board member** of the *Peer Community in Network Science*, since 2020.

**Editorial board member** of *Peer Community Journal*, since 2021; *Complex Systems* since 2017; Member of the Paris-region working group on ecology policy *Ecopolien*, since 2021. Member of the *Sciences Citoyennes* group, since 2022. *Computer Networks*, 2013–2016 (fixed duration); *Journal of Complex Networks*, 2013–21; *Social Networks Analysis and Mining* (SNAM), 2013–21; *Theoretical Computer Science* (TCS), 2014–21; *Computer Communications*, 2015–21; *Advances in Complex Systems*, 2016–21;

**Lead guest editor of:**

- special issue of *Theoretical Computer Science* (TCS) entitled *Link streams: models and algorithms*, volume 806, 2020.

- special issue of *Computer Networks* entitled *Link streams: methods and applications*, with Marco Fiore and Artur Ziviani, volume 150, 2019.
- collective book entitled *Trends in Social Network Analysis – Information Propagation, User Behavior Modelling, Forecasting, and Vulnerability Assessment*, following ASONAM 2015, with Rokia Missaoui and Talel Abdesslem, Springer, 2016.
- special issue of *Journal on Selected Areas of Communication* (JSAC) entitled *Measurement of Internet Topologies*, with Krishna Gummadi, Jean-Jacques Pansiot, Yuval Shavitt and Walter Willinger, volume 29, number 9, 2011 (ISSN 0733-8716).
- special issue of *Technique et Science Informatiques* (TSI) entitled *Graphes de Terrains* (in french), 2011.
- special issue of *Computer Communications* entitled *Complex Networks*, volume 34, issue 5, 2011.
- special issue of *Computer Networks* entitled *Complex Computer and Communication Networks*, with Walter Willinger, volume 52, issue 15, 2008.
- special issue of *Theoretical Computer Science* (TCS) entitled *Complex Networks*, with Ravi Kumar, volume 355, number 1, 2006.

### Program committees<sup>2</sup>:

- *European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases* (ECML PKDD), Turin, Italy, September 2023
- *49-th International Conference on Very Large Data Bases* (VLDB), Vancouver, Canada, August-September 2023
- *Applied Science track of the 29-th ACM SIGKDD Conference on Knowledge Discovery and Data Mining* (KDD), Long Beach, USA, August 2023
- *43-rd IEEE International Conference on Distributed Computing Systems* (ICDCS), Hong Kong, China, July 2023
- *NetSci*, Shanghai, July 2022
- *7-th IFIP Network Traffic Measurement and Analysis Conference* (TMA), Naples, Italy, June 2023
- *16-th ACM International Conference on Web Search and Data Mining* (WSDM), Singapore, February-March 2023
- *IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining* (ASONAM), Istanbul, Turkey, November 2022
- *Applied Science track of the 28-th ACM SIGKDD Conference on Knowledge Discovery and Data Mining* (KDD), Washington, USA, August 2022
- *6-th IFIP Network Traffic Measurement and Analysis Conference* (TMA), Enschede, The Netherlands, June 2022
- *Social Network Analysis and Graph Algorithms track of the 31-st Web Conference* (TheWebConf), Lyon, France, April 2022
- *15-th ACM International Conference on Web Search and Data Mining* (WSDM), Online, February 2022
- *IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining* (ASONAM), Online, December 2021
- *5-th IFIP Network Traffic Measurement and Analysis Conference* (TMA), September 2021, Online

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<sup>2</sup>Because of an evergrowing editorial workload, I decided to contribute only to program committees of top-ranked conferences in my field, since 2018.

- *Applied Science track of the 27-th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, Singapore, August 2021
- *Social Network Analysis and Graph Algorithms track of the 30-th Web Conference (TheWebConf)*, April 2021, Ljubljana, Slovenia
- *14-th ACM International Conference on Web Search and Data Mining (WSDM)*, March 2021, Online
- *IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM)*, December 2020, Online
- *Social Network Analysis and Graph Algorithms track of the 29-th Web Conference (TheWebConf)*, April 2020, Taipei, Taiwan
- *Social Network Analysis and Graph Algorithms track of the 28-th Web Conference (TheWebConf)*, May 2019, San Francisco, USA
- *44-th International Conference on Very Large Data Bases (VLDB)*, August 2018, Rio de Janeiro, Brazil
- *International School and Conference on Network Science (NetSci)*, June 2018, Paris, France
- *Social Network Analysis and Graph algorithms for the Web track of the 27-th ACM World Wide Web Conference (WWW)*, April 2018, Lyon, France
- *International Conference on SmartRail, Traffic and Transportation Engineering (ICS-TTE)*, December 2017, Hong Kong
- *4-th International Conference on Internet Science (INSCI)*, November 2017, Thessaloniki, Greece
- *5-th International Workshop on Complex Networks and their Applications (Complex Networks)*, November 2017, Milan, Italy
- *3-rd International Workshop on Dynamics in Networks (DyNo)*, September 2017, Skopje, Macedonia
- *4-th European Network Intelligence Conference (ENIC)*, September 2017, Duisburg, Germany
- *International Conference on Education Science and Education Management (ESEM)*, August 2017, Guilin, China
- *1-st international conference on Smart Digital Environment (SDE)*, July 2017, Rabat, Morocco
- *8-th International Conference on Data Communication Networking (DCNET)*, July 2017, Madrid, Spain
- *1-st IFIP Network Traffic Measurement and Analysis Conference (TMA)*, June 2017, Dublin, Ireland
- *8-th IEEE International Workshop on Network Science for Communication Networks (NetSciCom)*, May 2017, Atlanta, USA
- *Social Networks and Graph Analysis track of the 26-th ACM World Wide Web Conference (WWW)*, April 2017, Perth, Australia
- *5-th Workshop on Complex Networks and their Applications (Complex Networks)*, November-December 2016, Milan, Italy
- *2-nd International Workshop on Dynamics in Networks (DyNo)*, August 2016, San Francisco, California, USA
- *7-th International Conference on Data Communication Networking (DCNET)*, July 2016, Lisbon, Portugal

- *32-nd IEEE International Conference on Data Engineering (ICDE)*, May 2016, Helsinki, Finland
- *Social Networks and Graph Analysis and Web science tracks of the 25-th ACM World Wide Web Conference (WWW)*, April 2016, Montréal, Canada
- *International School and Conference on Network Science NetSciX*, January 2016, Wrocław, Poland
- *Time(s) and temporalities of the Web*, December 2015, Paris, France
- *4-th International Workshop on Complex Networks and their Applications*, November 2015, Bangkok, Thailand
- *6-th IEEE international workshop on TRaffic Analysis and Classification (TRAC)*, August 2015, Dubrovnik, Croatia
- *7-th ACM international conference on Web Science (WebSci)*, July 2015, Oxford, UK
- *Mediterranean Conference on Information & Communication Technologies (MedICT)*, May 2015, Saïdia, Morocco
- *Social Networks and Graph Analysis track of the 24-th ACM World Wide Web Conference (WWW)*, May 2015, Florence, Italy
- PC co-chair, *7-th IEEE International Workshop on Network Science for Communication Networks (NetSciCom)*, April 2015, Hong Kong, China
- *5-th IEEE international workshop on TRaffic Analysis and Classification (TRAC)*, August 2014, Nicosia, Cyprus
- *6-th ACM international conference on Web Science (WebSci)*, June 2014, Bloomington, Indiana, USA
- *8-th IEEE International Conference on Research Challenges in Information Science (RCIS)*, May 2014, Marrakesh, Morocco
- *6-th IEEE International Workshop on Network Science for Communication Networks (NetSciCom)*, April-May 2014, Toronto, Canada
- *Conférence de Recherche en Informatique (CRI)*, Décembre 2013, Yaoundé, Cameroun
- *11-th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC)*, November 2013, Zhangjiajie, China
- *6-th Smart Territory and Networks (STaN) satellite workshop of ECCS*, September 2013, Barcelona, Spain
- *4-th IEEE international workshop on TRaffic Analysis and Classification (TRAC)*, July 2013, Cagliari, Italy
- *2-nd Annual Workshop on Symplifying Complex Networks for Practioners (Simplex)*, May 2013, Rio de Janeiro, Brazil
- *5-th IEEE International Workshop on Network Science for Communication Networks (NetSciCom)*, April 2013, Turin, Italy
- *IEEE Symposium on Wireless Telecommunications Applications (ISWTA)*, September 2012, Bandung, Indonesia
- *3-rd IEEE international workshop on TRaffic Analysis and Classification (TRAC)*, August 2012, Limassol, Cyprus
- *1-st International Conference on Mobile Intelligent System (ICMIS)*, July 2012, Rabat, Morocco
- *Social Networks track of the ACM World Wide Web Conference (WWW)*, April 2012, Lyon, France
- *3-rd international workshop on Complex Networks (CompleNet)*, March 2012, Melbourne, Florida, USA

- *Emergent Properties in Natural and Artificial Complex Systems* (EPNACS), September 2011, Vienna, Austria
- *International Conference on Digital Information and Communication Technology and its Applications* (DICTAP), June 2011, Dijon, France
- *5-th International ICST Conference on Performance Evaluation Methodologies and Tools* (ValueTools), May 2011, Cachan. France
- *3-rd IEEE International Workshop on Network Science for Communication Networks* (NetSciCom), April 2011, Shanghai, China
- *Social Systems and Graph Analysis track of the ACM World Wide Web Conference* (WWW), March 2011, Hyderabad, India
- *2-nd international workshop on Complex Networks* (CompleNet), October 2010, Rio de Janeiro, Brazil
- *IEEE GlobeCom Workshop on Complex and Communication Networks* (CCNet), October 2010, Miami, Florida, USA
- *2-nd workshop on Simplifying Complex Networks for Practitioners* (Simplex), June 2010, Genoa, Italy
- *Modèles et apprentissages en Sciences Humaines et Sociales* (MASHS), juin 2010 Lille, France
- *2-nd IEEE International Workshop on Network Science for Communication Networks* (NetSciCom), March 2010, San Diego, CA, USA
- *10ième Conférence Internationale Francophone sur l'Extraction et la Gestion des Connaissances* (EGC), janvier 2010, Hammamet, Tunisie
- *4-th International Conference on Performance Evaluation Methodologies and Tools* (ValueTools), October 2009, Pisa, Italy
- *1-st Annual Workshop on Symplifying Complex Networks for Practioners* (Simplex), July 2009, Venice, Italy
- Co-président avec Clémence Magnien (LIP6) du comité scientifique de la conférence internationale *Advances in the Analysis of Online Paedophile Activity*, June 2009, Paris, France.
- *1-st IEEE International Workshop on Network Science For Communication Networks* (NetSciCom), April 2009, Rio de Janeiro, Brazil
- 10-èmes *Journées Doctorales en Informatique et Réseaux* (JDIR), février 2009, Belfort, France
- *3rd Workshop on Interdisciplinary Systems Approach in Performance Evaluation and Design of Computer & Communication Systems* (InterPerf), October 2008, Athens, Greece
- Co-président avec Anne-Marie Kermarrec (INRIA/ASAP) et Arnaud Legout (INRIA/Planète) du comité scientifique de l'école d'été *ResCom 2008*, thème *Réseaux dynamiques*. St Jean Cap Ferrat, 15–20 juin 2008.
- *16-th International Conference on Computer Communications and Networks* (ICCCN), August 2007, Honolulu, Hawaii, USA
- *13-th international conference on High Performance Computing* (HiPC), December 2006, Bangalore, Inde
- *15-th International Conference on Computer Communications and Networks* (ICCCN), October 2006, Arlington, Virginia, USA
- *8-èmes rencontres francophones sur les aspects Algorithmiques des Télécommunications* (AlgoTel), mai 2006, France

- *25-th International Performance Computing and Communications Conference (IPCCC)*, April 2006, Phoenix, Arizona, USA
- *1-st International Conference on Internet and Web Applications and Services (ICIW)*, février 2006, Guadeloupe, France
- *2-nd International Conference on Distributed Computing & Internet Technology (ICD-CIT)*, décembre 2005, Bhubaneswar, Inde
- *2-nd international workshop on Combinatorial and Algorithmic Aspects of Networking (CAAN)*, août 2005, Waterloo, Canada
- Co-président avec Philippe Owezarski (LAAS, CNRS) du comité scientifique des 7-èmes *rencontres francophones sur les aspects Algorithmiques des Télécommunications (AlgoTel)*, presque île de Giens, 11–13 mai 2005.
- Co-président avec Pierre Fraigniaud (LRI) et Clémence Magnien (CREA) du comité scientifique de l'école thématique *Grands Réseaux d'Interactions*, Paris, 25–30 avril 2005.

### Evaluation:

- 2022: committee for the IAPau4 prize (data science hackaton for students and companies).
- 2021: nominator for the VinFuture Prize, international scientific prize offered by Vietnam.
- 2021: selection committee for the International Doctoral Program on Modeling Complex Systems (PDI MSC), at Sorbonne University.
- 2020: committee for the 2020 INSNA Simmel award <https://www.insna.org/simmel-award>
- 2016–2018: scientific and ethical committee for the ENAC study on Individual Behavior Evaluation.
- 2016: HCERES evaluation committee of the *Institut de Recherche en Informatique et Systèmes Aléatoires (IRISA)* laboratory, Rennes, France.
- 2015, 2016: monitoring committee of ISC-PIF (CNRS UPS 3611).
- 2013: AERES evaluation committee of the *Laboratoire Spécification et Vérification (LSV)* laboratory, Cachan, France.
- 2013: selection of PDI *Modeling of Complex Systems* UPMC PhD program (approx. 2 days).
- 2011–18: evaluation of *Crédit Impôt Recherche (CIR)* and *Jeunes Entreprises Innovantes (JEI)* application files.
- Since 2009: consulting for companies on topics like complex networks and data analysis and modeling.
- Evaluation of application files submitted to *Fonds National de la Recherche Scientifique (FNRS)*, Belgium; *Comité Français d'Evaluation de la Coopération Scientifique et Universitaire avec le Brésil (COFECUB)*, Brazil; *Committee for Research Evaluation (CIVR)*, Italy; *Netherlands Organisation for Scientific Research (NWO)*, Netherlands; *Complexity-Net* and *Safer Internet Plus* programmes, European Community; public incubator for young technology companies *Agoranov*, France; and various ANR calls (France).
- PhD committees of: Fabienne Venant, member, 2005; Romain Boulet, referee, 2008; Yoann Pigné, invité, 2008; Vincent Limouzy, referee, 2008; Mohssen Abboud, referee, 2008; Nicolas Pissard, chair, 2008; Pierre-Nicolas Clauss, referee, 2009; Jean-Philippe Cointet, member, 2009; Rémi Dorat, referee, 2009; Alexis Darrasse, member, 2010; Lionel Tabourier, member, 2010; Fernando Silveira, chair, 2010; Lionel Molinier, member, 2010; Brice Augustin, chair, 2010; Dan-Cristian Tomozei, chair, 2011; Romain Campigotto, chair, 2011; Marianna Carrera, chair, 2011; Ítalo Cunha, chair, 2011; Qinna Wang, referee, 2012; The Anh Dang, referee, 2012; Annette Casagrande, referee, 2012; François Queyroi,

referee, 2013; Stéphane Raux, chair, 2014; Maximilien Danisch, chair, 2015; Arnaud Grignard, chair, 2015; Benjamin Girault, member, 2015; Kevin Chapuis, chair, 2016; Nicolas Gensollen, chair, 2016; Alberto Lumbreras, member, 2016; Jean Creusefond, referee, 2017; Marie Bricage, referee, 2018; Catalina Obando Forero, chair, 2018; Raphaël Tackx, chair, 2019; Julio Navarro Lara, referee, 2019; Léa Longepierre, member, 2020; Hong-Lan Botterman, chair, 2021; Achille Salaün, referee, 2021; Nejat Arinik, referee, 2021; Quentin Lutz, referee, 2022; Gaëlle Candel, referee, 2022. .

- HDR committees of: Bertrand Jouve, referee, 2009; Bénédicte Le Grand, chair, 2011; Etienne Birmelé, referee, 2011; Christophe Prieur, chair, 2012; Pierre Borgnat, referee, 2014; Mauro Sozio, member, 2017; Christophe Crespelle, member, 2017; Marton Karsai, referee, 2019; Gilles Tredan, referee, 2019.

**Reviewer** for 45 international journals: *Algorithms*, *Annals of Telecommunications*, *Applied Network Science*, *Applied Physics Letters* (APL), *Ars Combinatoria*, *Computer Communications*, *Computer Networks*, *Discrete Applied Mathematics* (DAM), *Discrete Mathematics and Theoretical Computer Science* (DMTCS), *Discrete Mathematics*, *European Journal of Operational Research* (EJOR), *Fundamenta Informaticae*, *IEEE Communications Surveys and Tutorials* (CST), *IEEE Control Systems Magazine*, *IEEE Journal on Selected Areas in Communications* (JSAC), *IEEE Transactions on Parallel and Distributed Systems* (TPDS), *IEEE/ACM Transactions on Networking* (ToN), *Information Processing Letters* (IPL), *Information Sciences* (INS), *International Journal of Computer Mathematics* (IJCM), *International Journal of Unconventional Computing* (IJUC), *Journal of Communications and Networks* (JCN), *Journal of Computational Science* (JOCS), *Journal of Computer Science*, *Journal of Engineering and Computer Innovations* (JECI), *Journal of Experimental Algorithmics* (JEA), *Journal of Graph Algorithms and Applications* (JGAA), *Journal of Mathematical Sociology*, *Journal of Systems and Software* (JSS), *Journal of the ACM* (JACM), *Journal of the Royal Society Interface*, *Knowledge and Information Systems* (KIS), *Mathematics in Computer Science* (MCS), *Network Science*, *Networks*, *Neurocomputing*, *Physica A*, *PLOS ONE*, *RAIRO – Theoretical Informatics and Applications*, *Social Networks*, *Social Networks Analysis and Mining*, *The Computer Journal*, *The European Physical Journal B* (EPJ B), *Theoretical Computer Science* (TCS), et diverses conférences.

## PhD advising

- Bastien Legay.** *Résistance – Perturber les Infrastructures en Réseaux*. 2022–
- Guillaume Moinard.** *Analyse de Nouvelles Formes de Protestation*. 2022–
- Léo Rannou.** *Temporal Connectivity and Path Computation for Stream Graph*. Co-advising (33%) with Clémence Magnien and Christophe Meyer, 2017–2020
- Armel Jacques Nzekon Nzeko'o.** *Recommender system with temporal dynamics based on link streams*. Co-advising (50%) with Maurice Tchuenta, 2015–2019
- Audrey Wilmet.** *Anomaly detection in link streams with combined structural and temporal features*. Co-advising (50%) with Robin Lamarche-Perrin, 2016–2019
- Aurore Payen.** *Importance of time information in spreading phenomena – an illustration on cattle trade data*. Co-advising (50%) with Lionel Tabourier, 2015–2018
- Thibaud Arnoux.** *Predicting interactions in link streams: combining structural and temporal features*. Co-advising (50%) with Lionel Tabourier, 2015–2018
- Noé Gaumont.** *Clusters and communities in link streams: from data to algorithms*. Co-advising (50%) with Clémence Magnien, 2013–2016
- Tiphaine Viard.** *Link streams for the modeling of interactions over time, and application to IP traffic analysis*. Co-advising (50%) with Clémence Magnien, 2013–2016



- Eric Freyssinet.** *Botnet fighting: analysis and strategy.* Co-advising (50%) with David Naccache, 2012–2015
- Elie Rotenberg.** *An approach for reliable estimates of internet topology properties.* Co-advising (50%) with Christophe Crespelle, 2010–2015
- Daniel Bernardes.** *Information Diffusion in Complex Networks: Measurement-Based Analysis Applied to Modelling.* Co-advising (30%) with Fabien Tarissan, 2010–2014
- Raphaël Fournier** *Detection and analysis of a rare topic in large query sets: paedophile activity in P2P.* 2009–2012
- Assia Hamzaoui.** *Event detection in the dynamics of large complex networks: a statistical application and its application to the radar of the internet.* 2007–2011.
- Oussama Allali** *Structure and dynamics of bipartite complex networks: internal links and link prediction.* Co-advising (50%) with Clémence Magnien. 2008–2011.
- Thomas Aynaud.** *Community detection in dynamic complex networks.* Co-advising (20%) with Jean-Loup Guillaume. 2008–2011.
- Abdelhamid Salah Brahim.** *Information spreading and community structures in a blog network.* Co-advising (20%) with Bénédicte Le Grand. 2008–2011.
- Massoud Seifi.** *Stable community cores in complex networks.* Co-advising (20%) with Jean-Loup Guillaume. 2008–2011.
- Wang Xiaomin.** *Deciding on the type of the degree distribution of a graph from traceroute-like measurements.* Co-advising (50%) with Michèle Soria. 2008–2011.
- Frédéric Ouédraogo.** *A new approach for sutying internet topology: ego-centered measurements and radar.* Co-advising (10%) with Clémence Magnien and Oumarou Sié. 2007–2009.
- Fabien Viger.** *Contributions to the measurement and modeling of internet topology.* Co-advising (80%) with Serge Fdida. 2004–2007.
- Pascal Pons.** *Community detection in complex networks.* 2004–2007.
- Jean-Loup Guillaume.** *Statistical analysis and modeling of complex networks.* 2001–2004.

## Recent invited talks, thematic school courses, and teaching

- July 7, 2020: *Betweenness Centrality in Continuous-Time Link Streams.* AATG (*Algorithmic Aspects of Temporal Graphs*), an ICALP workshop, Online
- June 22-26, 2020: *Analyse de réseaux.* Master course at ESGI (Ecole Supérieure de Génie Informatique), Paris, France. 42 hours.
- July 8-19, 2019: *Network and Link Stream Analysis.* EMA thematic school on *Foundations of Artificial Intelligence*, Cameroon
- June 12, 2019: *Analysis of financial transactions with link streams.* Blockchain Day, LINCOS, Paris, France
- April 16, 2018: *Analysis of Temporal Interactions with Link Streams.* ICCGT (*International Conference on Combinatorics, Graph Theory and Applications*), VIASM, Hanoi, Vietnam
- May 3, 2018: *Stream Graphs and Link Streams for the Modeling of Interactions over Time.* SAMOVAR lab seminar, Evry, France
- May 14, 2018: *Analysis of temporal interactions with link streams.* LINCOS, Paris, France
- June 7, 2018: *Stream Graphs, Link Streams, and Related Algorithmic Challenges.* Collège de France, Paris, France

- June 11, 2018: *Analyzing Bitcoin Transactions as a Link Stream*. BlockNet, a NetSci workshop, Paris, France
- June 12, 2018: *Analysis of temporal interactions with link streams*. LaRichNet, a NetSci workshop, Paris, France
- June 19, 2018: *Analyzing Bitcoin Transactions as a Link Stream*. BlockChain day, LIP6, Paris, France
- July 9, 2018: *Analysis of temporal interactions with link streams and stream graphs*. AATG (*Algorithmic Aspects of Temporal Graphs*), an ICALP workshop, Prague, Czech Republic
- September 24-28, 2018: *Analysis of temporal interactions with link streams*. Thematic school on *Networks and Complexity* in Cargèse, Corsica

## Science popularization

- *Le plaisir de faire des maths*, contribution to the book edited by Bertrand Jouve, in preparation.
- Interview for the journal *Le Parisien*, for the paper *Panne mondiale, critiques... Facebook, un géant pas si solide ?*, october 5th, 2021.
- *Working as a researcher at CNRS*, presentation to prospective candidates, december 1st 2020, GDR RSD. <https://gdr-rsd.cnrs.fr/node/48>
- Video pitch of my project on *Event Detection in Link Streams*, posted on YouTube, 2019. <http://edlist.complexnetworks.fr>
- *Initiation to research work*, hosting and advising of two high-school interns for a week, 2018, 2020.
- *Being a research scientist*, workshop in primary school, two day halves, 2018.
- *L'analyse à grande échelle de nos traces numériques*, article avec David Chavalarias, dans le livre *Les Big Data à Découvert* édité par le CNRS, 2016.
- *Modéliser les interactions au fil du temps*, article dans *Interstices*, 2015.
- Grands réseaux, réseaux sociaux, communautés, interactions et flux, intervention à *Futur en Seine* le 12 juin 2014, CNAM.
- *Des réseaux partout*, brève pour l'action *Mathématiques et Planète Terre*, octobre 2013, <http://www.brevés-de-maths.fr/des-reseaux-partout/>
- *Réseaux sociaux : comment les chercheurs savent (presque) tout de nous*, avril 2013, breakfast invited by Association des Journalistes Scientifiques de la Presse d'Information (AJSPI).
- *Réseaux sociaux: "Comment les chercheurs savent (presque) tout de nous ?"*, mars 2013, interview on Radio France Internationale (RFI), *Autour de la question*.
- Video for the site <http://complexnetworks.fr>: since 2008.
- *Happy Flu*, expérience interactive de diffusion sur le Web. Juillet 2008.
- Intervention sur *France Culture*, émission *Minuit Dix*, le 29 décembre 2006.
- Atelier à la *Fête de la Science*, octobre 2005.
- Expérience RELAIS. Septembre 2005 – mai 2007.
- *L'inextricable simplicité de l'internet*. *Tangente Sup*, décembre 2005.
- Exposition *Peintures et Images Scientifiques*, Jussieu, le 5 juin 2004. Avec Nathalie Chauvin.
- *Profils de dunes et démonstrations*. *Tangente 94*, septembre-octobre 2003.
- *L'impossible carte d'Internet*. *Le Minotaure 1*, pages 218–220, mars 2003.

- *Images à Comprendre*. Parution dans chaque numéro de *Tangente Sup*, 2002–2004. [http://www-rp.lip6.fr/~latapy/Images\\_a\\_comprendre/](http://www-rp.lip6.fr/~latapy/Images_a_comprendre/)
- *Le graphe du Web*. Avec Jean-Loup Guillaume. *Tangente*, hors série numéro 12, pages 12–14. Juillet 2002.
- *Numismatique et Informatique*. Avec Magali Vacherot. *L'Archéologue* 54, page 9. Juin-Juillet 2001.

## Acronyms used in this document

AERES	Agence d'Evaluation de la Recherche et de l'Enseignement Supérieur
ANR	Agence Nationale de la Recherche
CID	Commission Interdisciplinaire du CoNRS
CIR	Crédit Impôt Recherche
CNRS	Centre National de la Recherche Scientifique
CoNRS	Comité National de la Recherche Scientifique
CSS	Complex System Society
DGA	Direction Générale de l'Armement
DR	Directeur de Recherche
ENAC	Ecole Nationale de l'Aviation Civile
ENS	Ecole Normale Supérieure
FEDER	Fonds Européen de Développement Régional
FUI	Fonds Unique Interministériel
JEI	et Jeunes Entreprises Innovantes
HCERES	Haut Conseil de l'Evaluation de la Recherche et de l'Enseignement Supérieur
HDR	Habilitation à Diriger des Recherches
IFD	Institut de Formation Doctorale (consortium des écoles doctorales UPMC)
INRIA	Institut National de Recherche en Informatique et Automatique
ISC-PIF	Institut des Systèmes Complexes de Paris – Île de France
ISCC	Institut des Sciences de la Communication du CNRS
IXXI	Institut Rhône-Alpin des Systèmes Complexes
LIAFA	Laboratoire d'Informatique Algorithmique : Fondements et Applications UMR 7089 – CNRS et Université Paris Diderot – Paris 7
LIP6	Laboratoire d'Informatique de Paris 6 – UMR 7606 – CNRS et UPMC
MdC	Maître de Conférences
PDI	Programme Doctoral International
RNSC	Réseau National des Systèmes Complexes
RSR	Réseaux et Systèmes Répartis (département du LIP6 comptant 6 équipes)
SHS	Sciences Humaines et Sociales
SU	Sorbonne Université (anciennement UPMC)
UMR	Unité Mixte de Recherche (CNRS)
UPMC	Université Pierre et Marie Curie – Paris 6 (maintenant SU)
UPS	Unité Propre de Services (CNRS)